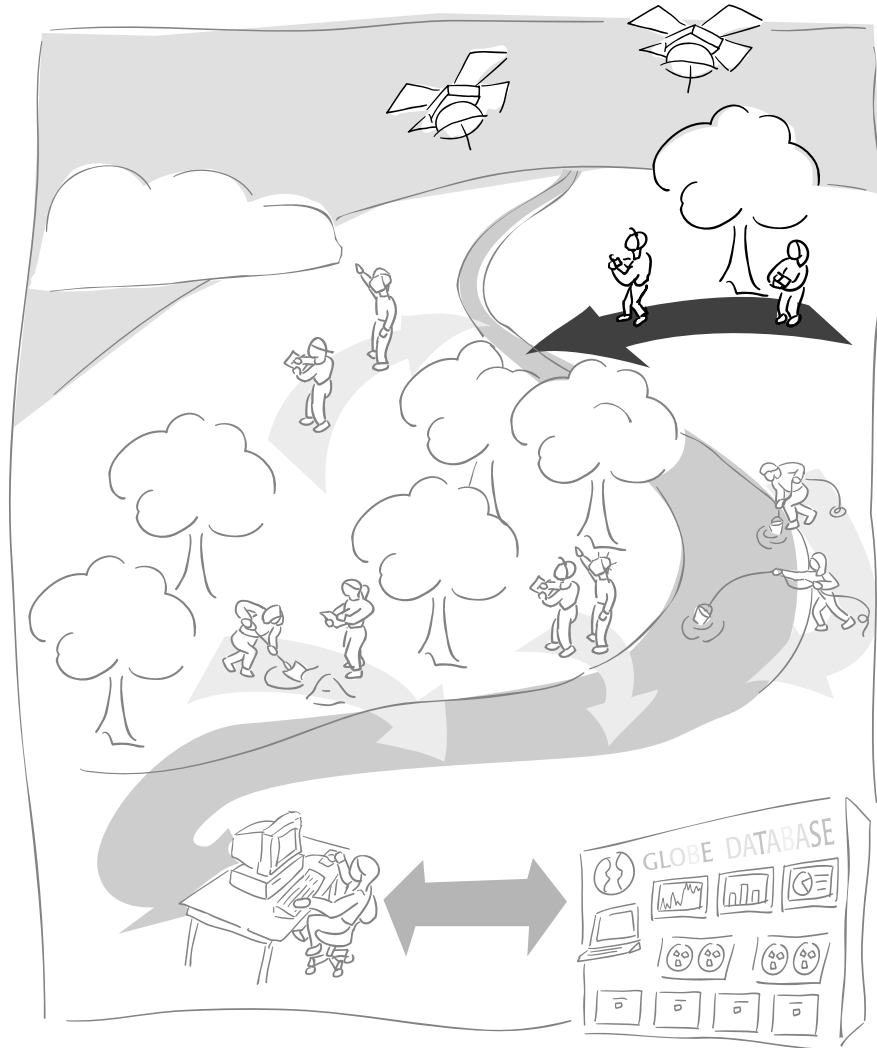


GPS Investigation



A GLOBE[®] Learning Investigation



GPS Investigation at a Glance



Protocol

Onetime Only Measurements:

Time of initial recording and averaged latitude, longitude, and elevation for the following Study Sites:

Atmosphere, Hydrology, Land Cover, Soil Characterization, Soil Moisture, and your school which is the center of your GLOBE Study Site.

Suggested Sequence of GPS Investigation

- Read the Protocol to learn precisely what is measured and how.
- Copy and distribute the *Field Guides* to your students.
- Prior to using the GPS receiver, identify all of your GLOBE sites that require latitude, longitude, and elevation measurements.
- Have the students conduct some test measurements near your school, following the *GPS Field Guide* found in the Protocol section. When you and your students are comfortable with the operation of the receiver go to your GLOBE study sites and, following the *GPS Field Guide*, take the position measurements at each site. Report your results back to GLOBE as soon as possible upon completing the measurements and calculations.
- If one or more of your sites are obscured by tree canopy, follow the *Offset GPS Activity Field Guide* to determine your site's position.
- If your students are experiencing difficulties with performing the measurements or are interested in further activities related to global positioning systems, refer to and conduct one or more of accompanying activities (*Relative and Absolute Directions* and *What is the Right Answer?*)

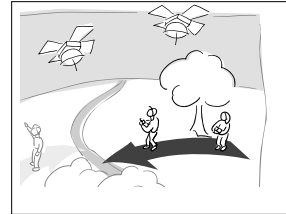




Table of Contents

Introduction

Overview	Introduction 1
Satellites	Introduction 1
GPS Satellites	Introduction 1

Protocols

GPS Measurement Protocol
GPS Protocol Field Guide
Offset GPS Protocol Field Guide

Learning Activities

What is the Right Answer?*
Relative and Absolute Directions

Appendix

Site Location Data Sheet	Appendix 2
GPS Investigation Data Sheet	Appendix 3
Offset Data Sheet	Appendix 4
Glossary	Appendix 5

* See the full e-guide version of the *Teacher's Guide* available on the GLOBE Web site and CD-ROM.